Amendment of the Specification (First Amendment p11)

The Specification is amended at page 10/line 21 to page 11/line 21 as follows:

(Currently Amended) The tube (20) having an inner wall (140) where at least one depression or groove (150) is formed in the inner wall (140) which receives at least one vane (90), of the at least one inner core (70) received into the tube (20), at a vane tip (98) and, as depicted, at least two vane tips (98) are received respectively into at least two grooves (150) formed in the inner wall (140).. The groove (150) comprising vane (90) restraining means securing the at least one inner core (70) in a fixed position within said tube (20). It will be appreciated by those of ordinary skill in the arts that the groove (150) may be a structure extending from the inner wall (140) forming a groove (150) which will receive at least one vane (90). Alternatively it is understood that the groove (150) may be a depression formed into the inner wall (140) capable of receiving the at least one vane (90). As will be appreciated by one of ordinary skill in these arts, vane (90) restraining means may be by a friction fit between the vane tip (98) when received into a groove (150) ~~or by application of an adhesive or a mechanical fixing means between the vane tip (98) and the groove (150)~~. In the preferred embodiment at least two depressions or grooves (150) are formed in the inner wall (140) with each of said grooves (150) receiving at least one vane (90). The at lease one vane having a vane surface (92). The at least one vane (90) extending from the central core element (25) along the length of said central core element (25). The surface (92) covered with a biofilm (97). In the preferred embodiment at least eight vanes (90) are spaced equidistant from the adjoining vane (90) and extending from the central core element (25).

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Amendment of the Specification (Second Amendment p12)

The Specification is amended commencing at page 11/line 22 to page 12/line 17 as follows:

(Currently amended) The tube (20) having an outer wall (190) having at least one fin (200) extending outwardly therefrom. As depicted the tube (20) has at least four fins (200) extending from said outer wall (190). However, one of ordinary skill in the arts will appreciate that fins of 1...n may be employed in accordance with the space available and surface area desired. The fin (200) is generally elongated having a fin surface (210) and, in the preferred embodiment, extends outwardly from the tube outer wall (190). Where a plurality of tubes (20) are utilized the plurality of tubes (20) contact adjacent tubes (20) at the respective tube outer walls (190) at least one contact point (195) where, in the preferred embodiment, affixing means, ~~including adhesives, mechanical fasteners~~ and other methods or devices as are appreciated by those in the affixing arts, are utilized to fix adjacent tubes together and hence to fix the position of the plurality of tubes (20) within the media matrix (1). Tube at least one contact points (195) are, in the preferred embodiment, flattened surfaces extending from the tube top (25) to the tube bottom (30) parallel with the tube axis (37). In an alternative embodiment, tubes (20) in a media matrix (1) may be alternatively or additionally fixed in position by affixing means employed at an intersection of fins (200) of adjoining tubes (20).

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Amendment of the Specification –(Third Amendment p16)

The Specification is amended from page 16/line 1 through page 17/line 1 as follows:

The tube (20) having an inner wall (140) where at least one depression or groove (150) is formed in the inner wall (140) which receives at least one vane (90), of the at least one inner core (70) received into the tube (20), at a vane tip (98) and, as depicted, at least two vane tips (98) are received respectively into at least two grooves (150) formed in the inner wall (140).. The groove (150) comprising vane (90) restraining means securing the at least one inner core (70) in a fixed position within said tube (20). It will be appreciated by those of ordinary skill in the arts that the groove (150) may be a structure extending from the inner wall (140) forming a groove (150) which will receive at least one vane (90). Alternatively it is understood that the groove (150) may be a depression formed into the inner wall (140) capable of receiving the at least one vane (90). As will be appreciated by one of ordinary skill in these arts, vane (90) restraining means may be by a friction fit between the vane tip (98) when received into a groove (150) ~~or by application of an adhesive or a mechanical fixing means between the vane tip (98) and the groove (150)~~. In the preferred embodiment at least two depressions or grooves (150) are formed in the inner wall (140) with each of said grooves (150) receiving at least one vane (90). The at lease one vane having a vane surface (92). The at least one vane (90) extending from the central core element (25) along the length of said central core element (25). The surface (92) covered with a biofilm (97). In the preferred embodiment at least eight vanes (90) are spaced equidistant from the adjoining vane (90) and extending from the central core element (25).

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Amendment of the Specification - (Fourth amendment p 17)

The Specification is amended at page 17/line 2-page 17/line 21 as follows:

The tube (20) having an outer wall (190) having at least one fin (200) extending outwardly therefrom. As depicted the tube (20) has at least four fins (200) extending from said outer wall (190). However, one of ordinary skill in the arts will appreciate that fins of 1...n may be employed in accordance with the space available and surface area desired. The fin (200) is generally elongated having a fin surface (210) and, in the preferred embodiment, extends outwardly from the tube outer wall (190). Where a plurality of tubes (20) are utilized the plurality of tubes (20) contact adjacent tubes (20) at the respective tube outer walls (190) at at least one contact point (195) where, in the preferred embodiment, affixing means~~, including adhesives, mechanical fasteners~~ and other methods or devices as are appreciated by those in the affixing arts, are utilized to fix adjacent tubes together and hence to fix the position of the plurality of tubes (20) within the media matrix (1). Tube at least one contact points (195) are, in the preferred embodiment, flattened surfaces extending from the tube top (25) to the tube bottom (30) parallel with the tube axis (37). In an alternative embodiment, tubes (20) in a media matrix (1) may be alternatively or additionally fixed in position by affixing means employed at an intersection of fins (200) of adjoining tubes (20).

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